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*Scientific
Intelligence
Report*

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**The United Arab Republic Ballistic Missile
and Space Programs**

16 AUG 1965

OSI-SR/65-29

2 August 1965

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DIRECTORATE OF SCIENCE AND TECHNOLOGY

Office of Scientific Intelligence

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Scientific Intelligence Report

THE UNITED ARAB REPUBLIC BALLISTIC MISSILE
AND SPACE PROGRAMS

Project Officer

OSI-SR/65-29

2 August 1965

CENTRAL INTELLIGENCE AGENCY

DIRECTORATE OF SCIENCE AND TECHNOLOGY

OFFICE OF SCIENTIFIC INTELLIGENCE

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PREFACE

The existence of a United Arab Republic (UAR) program for the development of surface-to-surface ballistic missiles, utilizing West German technicians, has been well publicized for some time. This report summarizes UAR missile and space developments,

Both open source and classified information available by 27 July 1965 has been used. Throughout this paper the terms United Arab Republic and Egypt are used interchangeably.

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THE UNITED ARAB REPUBLIC BALLISTIC MISSILE AND SPACE PROGRAMS

PROBLEM

To assess the ballistic missile and space programs of the
United Arab Republic.

SUMMARY AND CONCLUSIONS

4. The program has been plagued by technical, personnel, and financial difficulties almost since it began in 1960. The Egyptians, however, undoubtedly are aware of Israeli efforts to acquire a missile system from France and seem as determined as ever to continue development of their own systems.

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DISCUSSION

EARLY UAR ROCKETRY ACTIVITIES

The UAR has shown an intense interest in acquiring guided missiles since World War II and has approached most of the missile-producing nations of the world on this matter at one time or another. These approaches have included offers of outright purchase, licensed manufacture in Egypt, and the recruitment of Western European technicians to develop rockets of relatively unique design. Figure 1 summarizes the major milestones leading toward a United Arab Republic missile capability.

On 23 July 1962, in connection with the week-long celebration of the 10th anniversary of the Egyptian revolution, the UAR displayed rockets of two different sizes as evidence of the country's scientific and technological achievement. Ten of each rocket, the larger called Al Qahir (The Conqueror), and the smaller, called Al Zafir (The Victor), were

paraded through the streets of Cairo. Two days before the parade, two of each type were launched from a desert range.¹

One year later, in the July 1963 parade, the Egyptians again displayed their Conqueror and Victor missiles [redacted] this time only six of each.

[redacted]
The parades in July 1964 and July 1965 were essentially repeats of the 1963 parade.

Development Under German Scientists

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UNITED ARAB REPUBLIC
MISSILE PROGRAM MILESTONES

UAR SURFACE-TO-SURFACE MISSILES

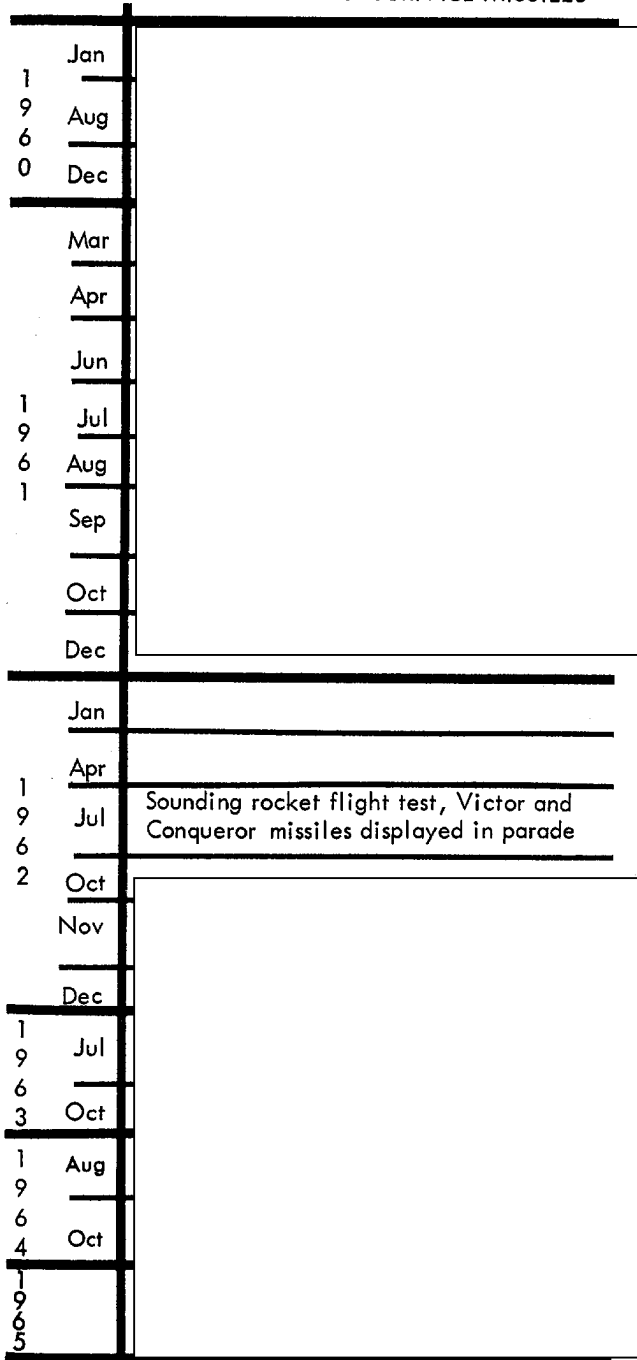


Figure 1

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Purchase of US Sounding Rockets

Probably to gain experience with proven hardware, the Egyptians, in October 1961, purchased six Rocmiz IV sounding rockets from the Zimney Corporation of Monrovia, California.

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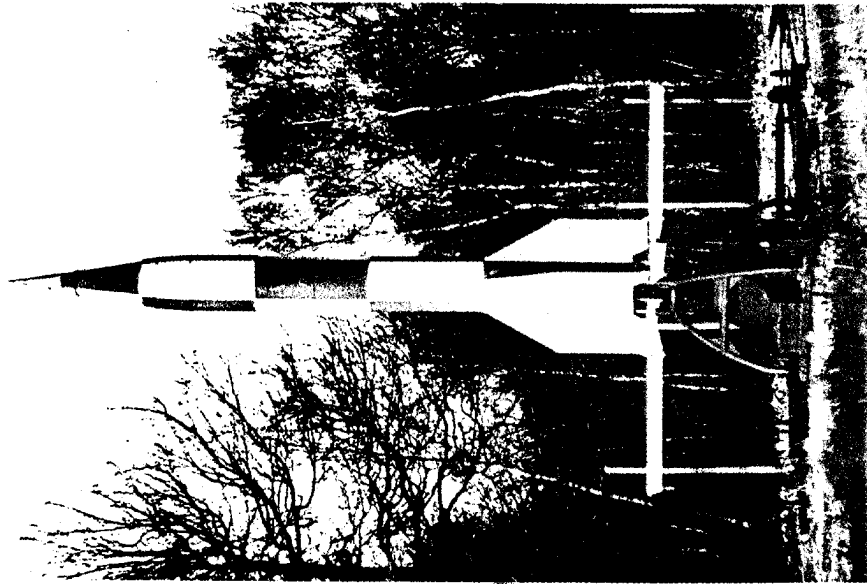
on 21 July 1962, two days before the 10th anniversary parade, representatives of the press were invited to witness from a distance the firing of four rockets (two Victors and two Conquerors) at a site in the desert northwest of Cairo.

THE UAR MISSILES

The Victor (Al Zafir)

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Figure 2



FRENCH VERONIQUE ROCKET, 1955

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Figure 3

US ROCMIZ IV SOUNDING ROCKET (JAVELIN/VIPER), 1961



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PRESENT MISSILE AND SPACE RESEARCH
AND DEVELOPMENT

Military Conversion Program

The Victor, when first displayed in the July 1962 parade, [REDACTED]

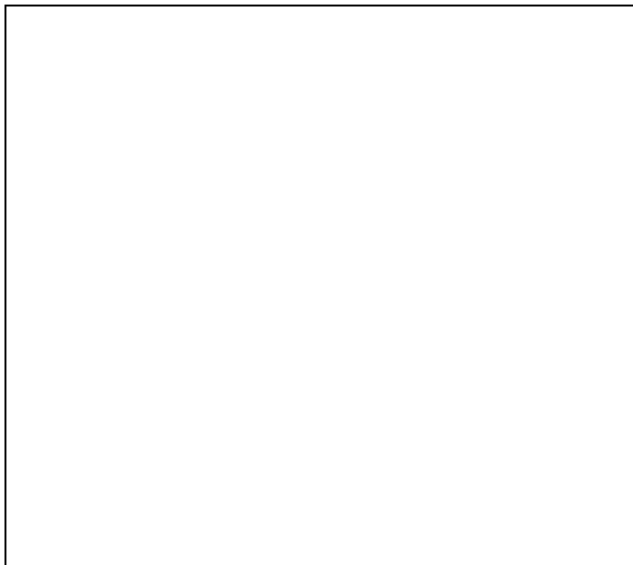
[REDACTED] The ten shown were transported rather simply on standard commercial vehicles of both Soviet and West German origin. By the July 1963 parade, however, several improvements had been made. Four jet vanes were evident at the rear of the rocket motor [REDACTED]

[REDACTED] Also, two of the six Victors displayed were mounted on mobile erector-launchers, constructed on Soviet ZIL 157V truck chassis. (See figure 4.)

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UAR VICTOR (AL ZAFIR) MISSILE

Figure 4



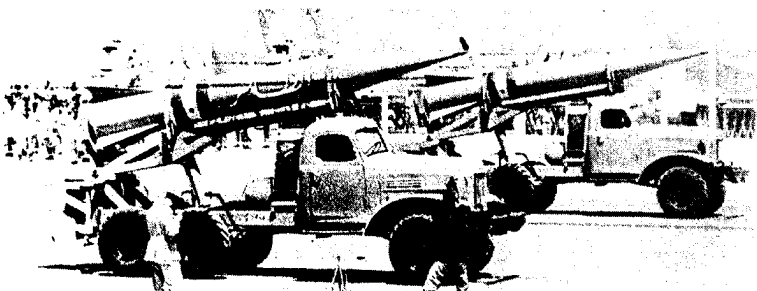
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UAR VICTOR ON A MOBILE LAUNCHER,
23 JULY 1963



JULY 1962



JULY 1964

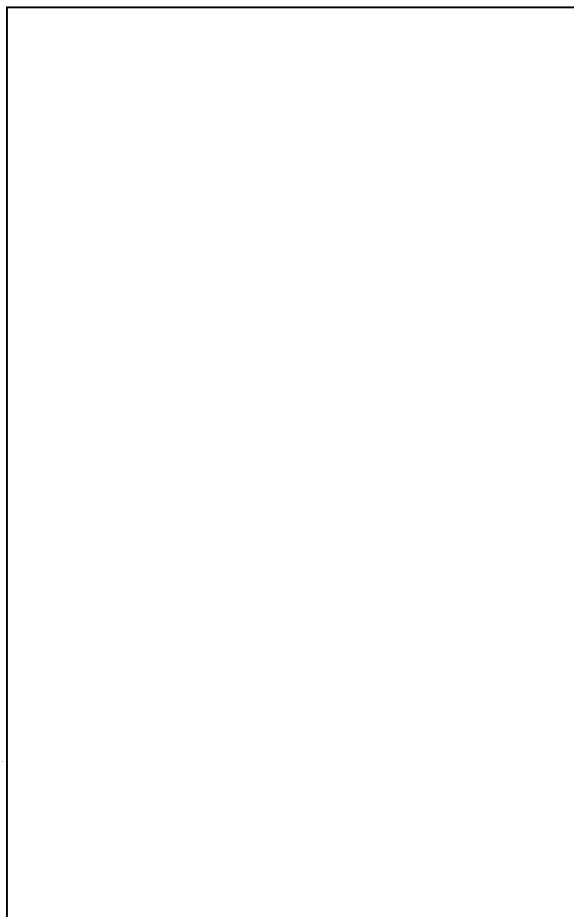
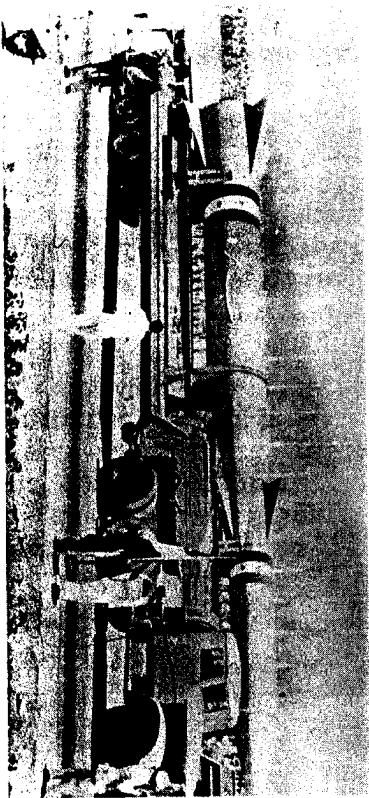


Figure 5

UAR CONQUEROR (AL QAHIR) MISSILE



JULY 1962

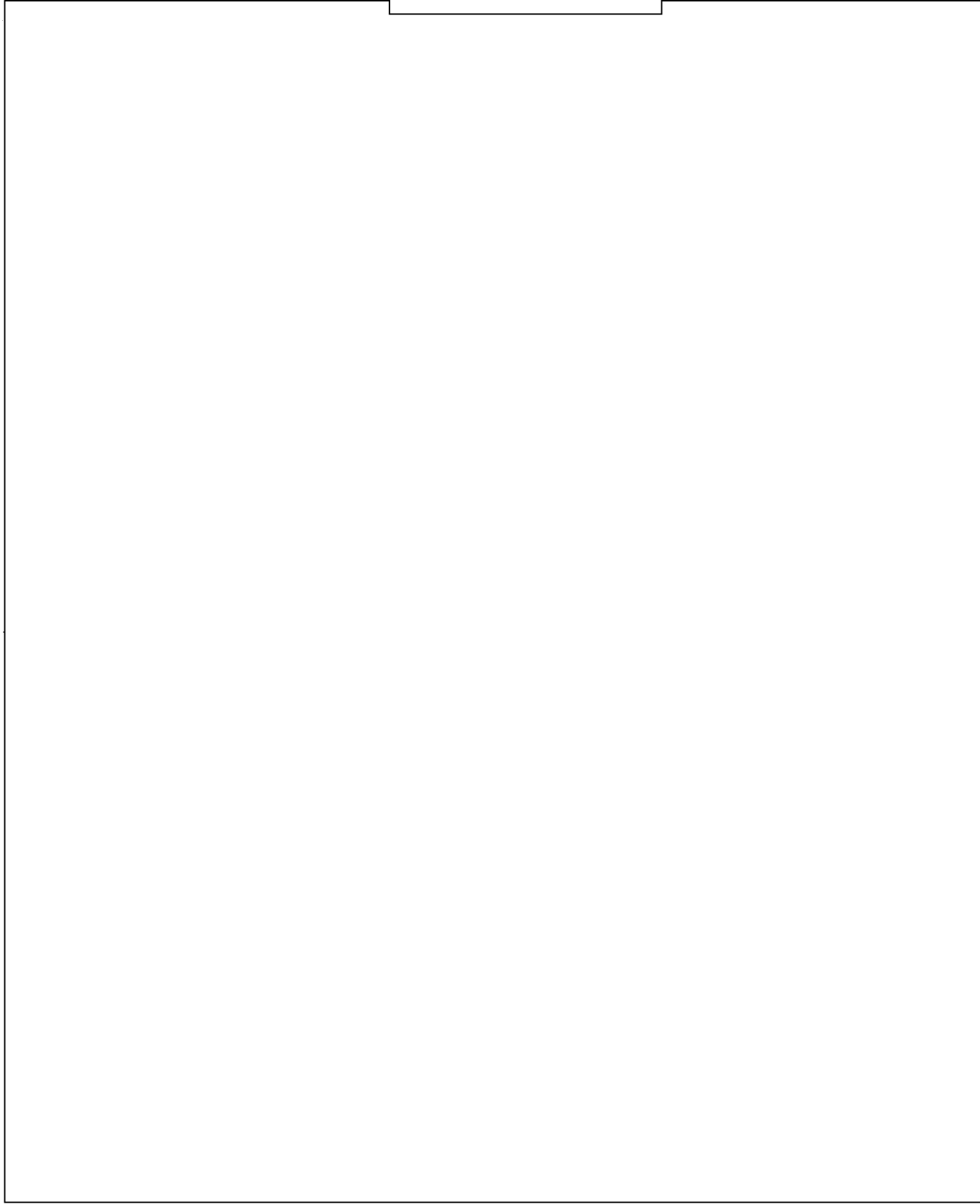


JULY 1963, 1964

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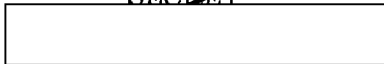
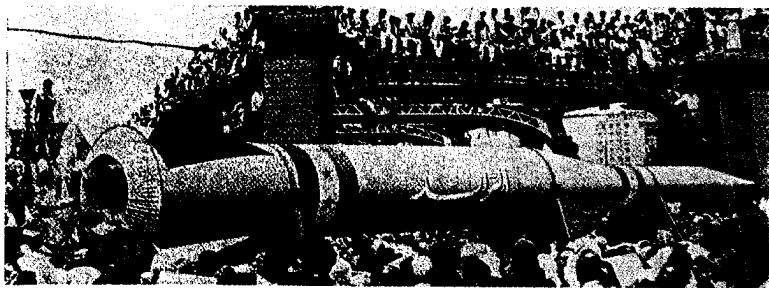


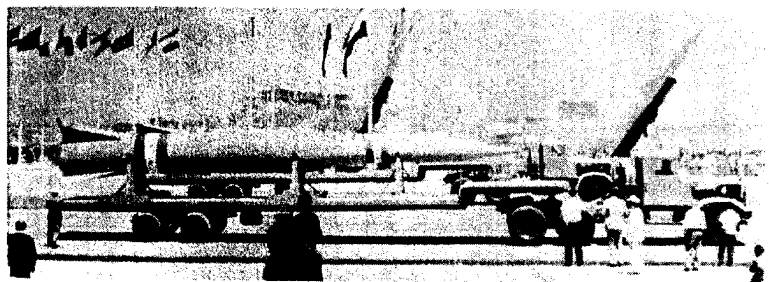
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UAR PIONEER (AL RA'ID) MISSILE



UAR Pioneer (Al Ra'id) Two-Stage Missile, July 1963



July 1964

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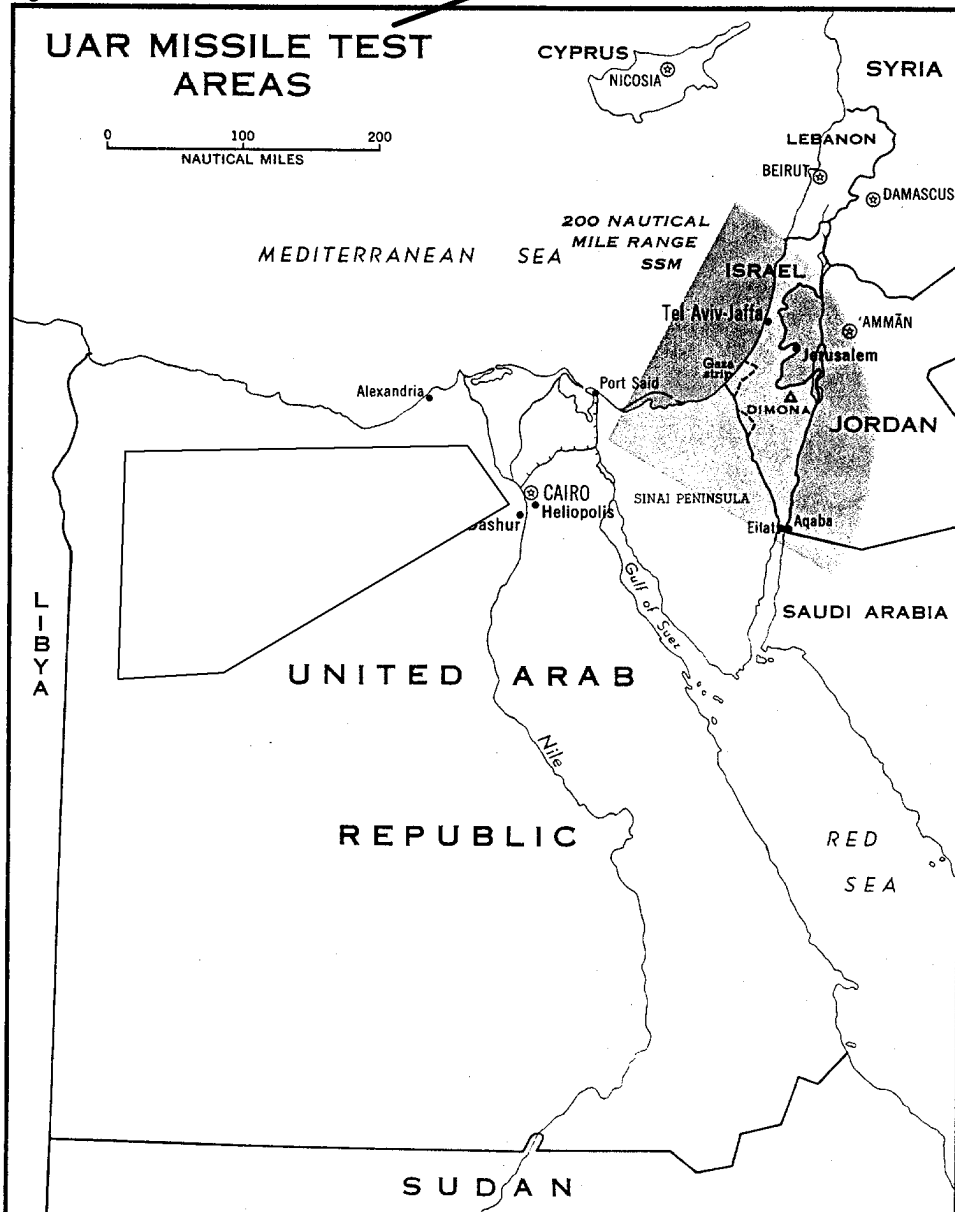
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Figure 9

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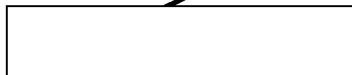


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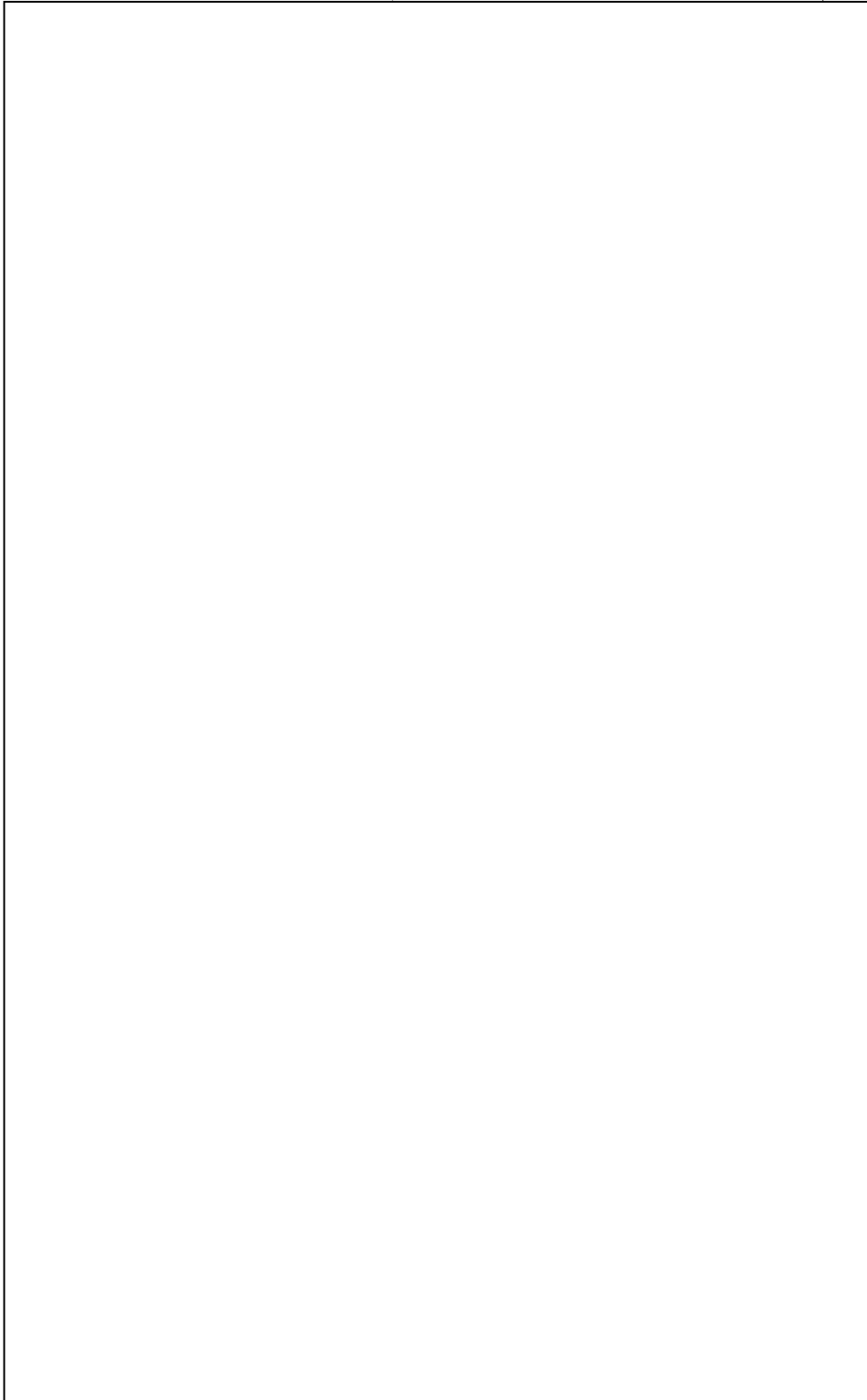
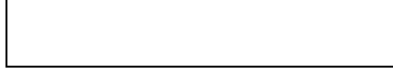
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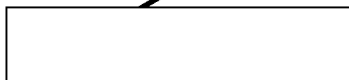
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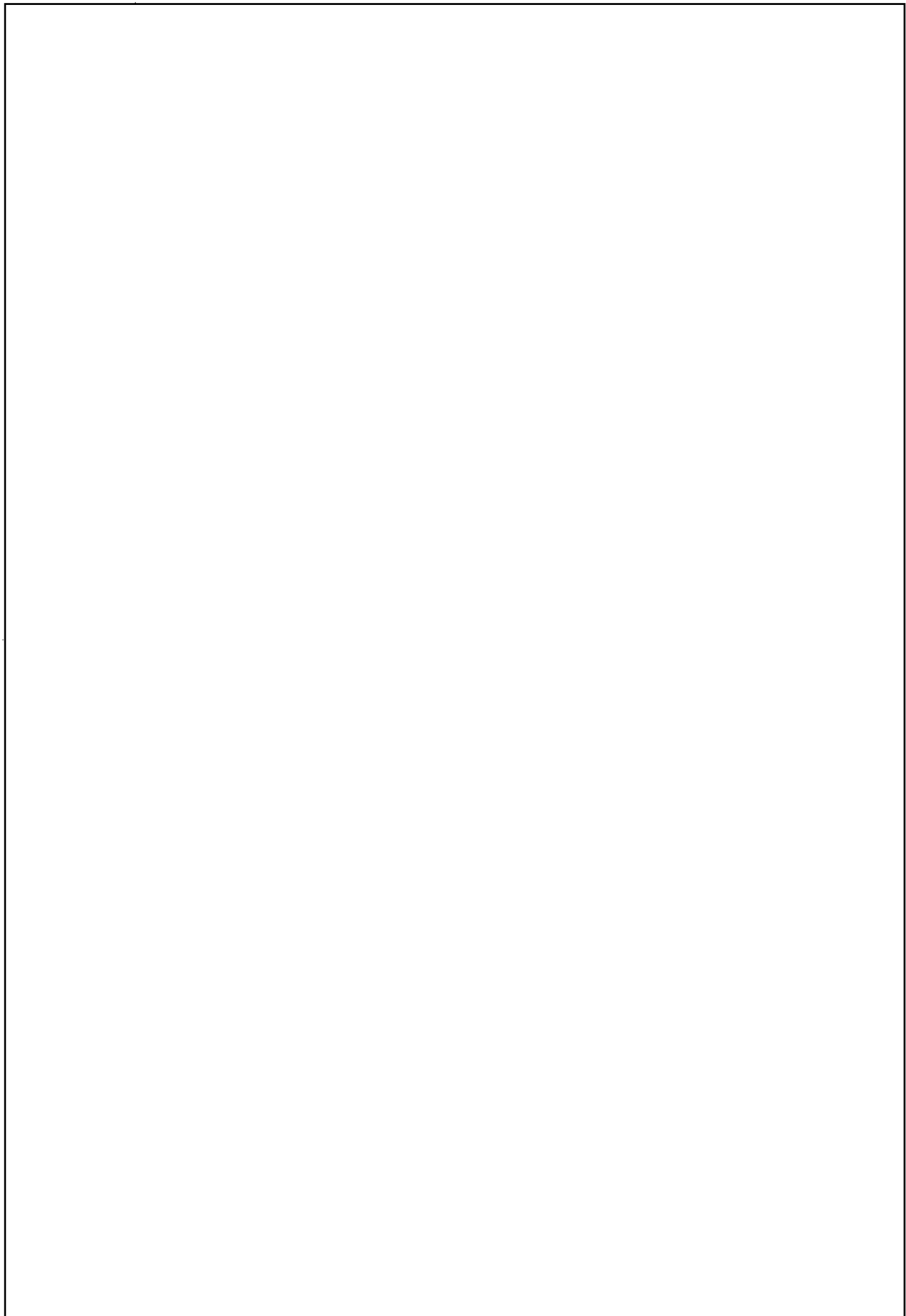
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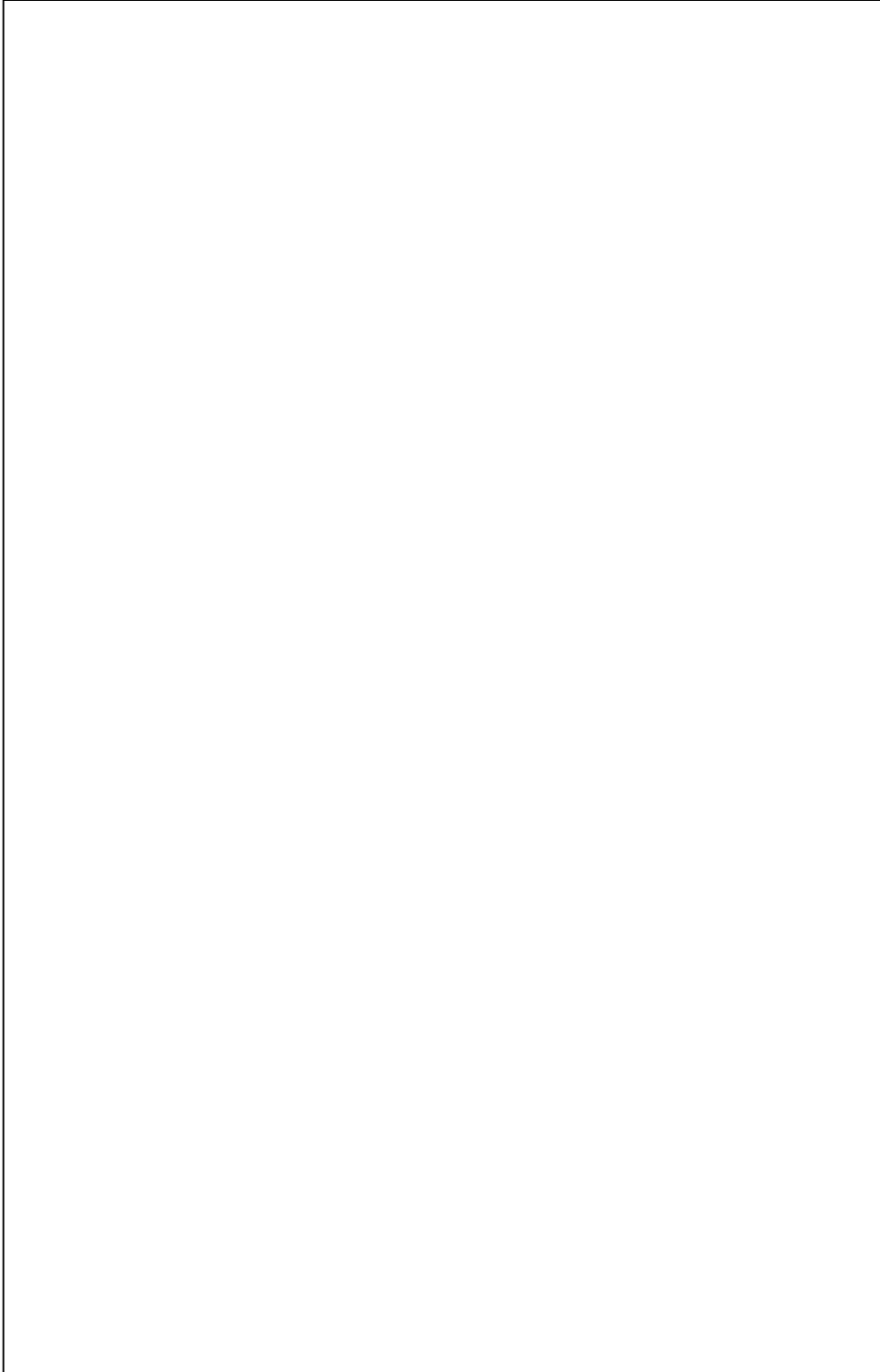
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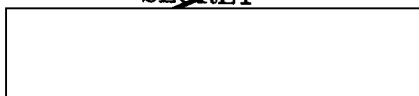
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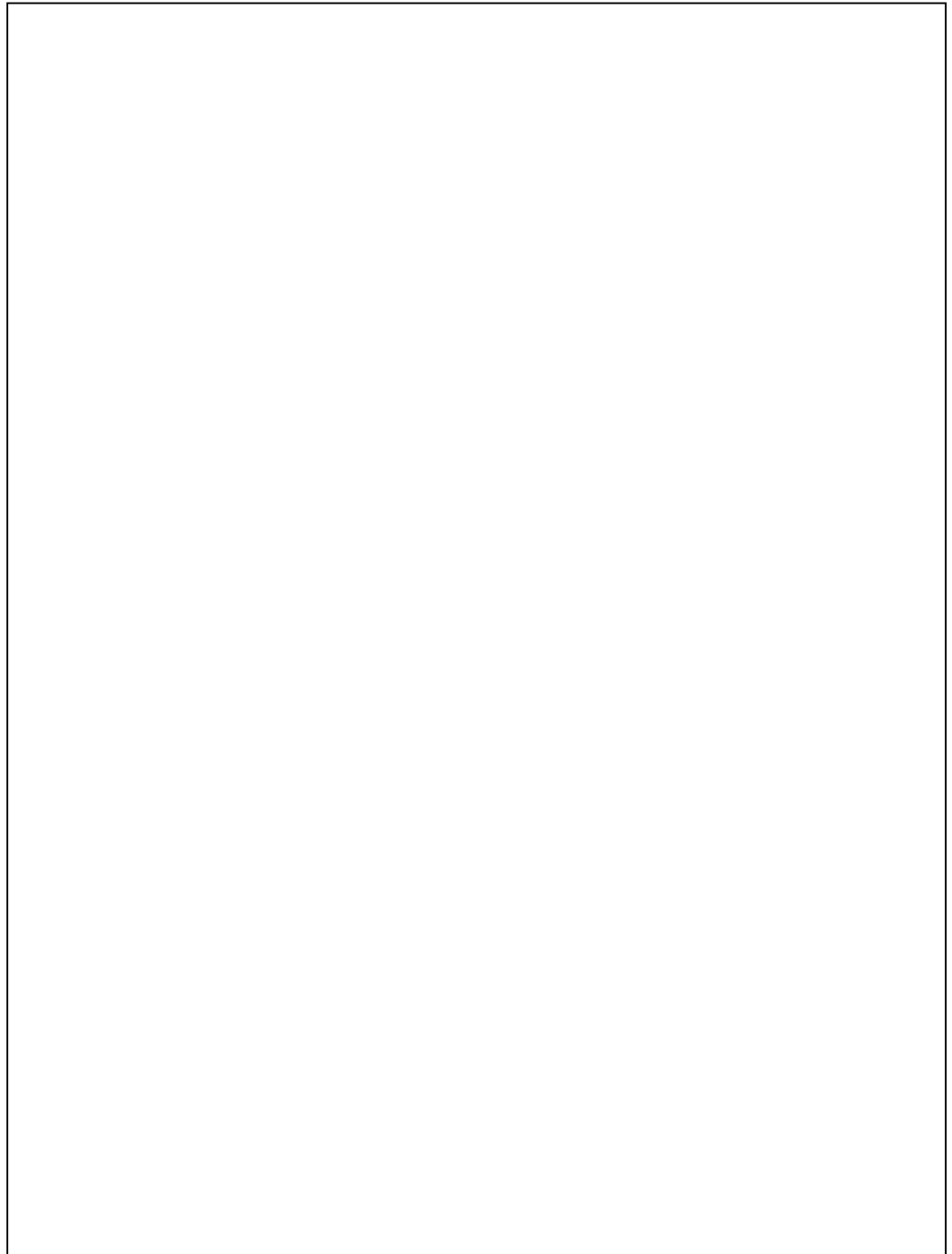
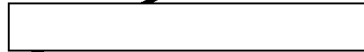
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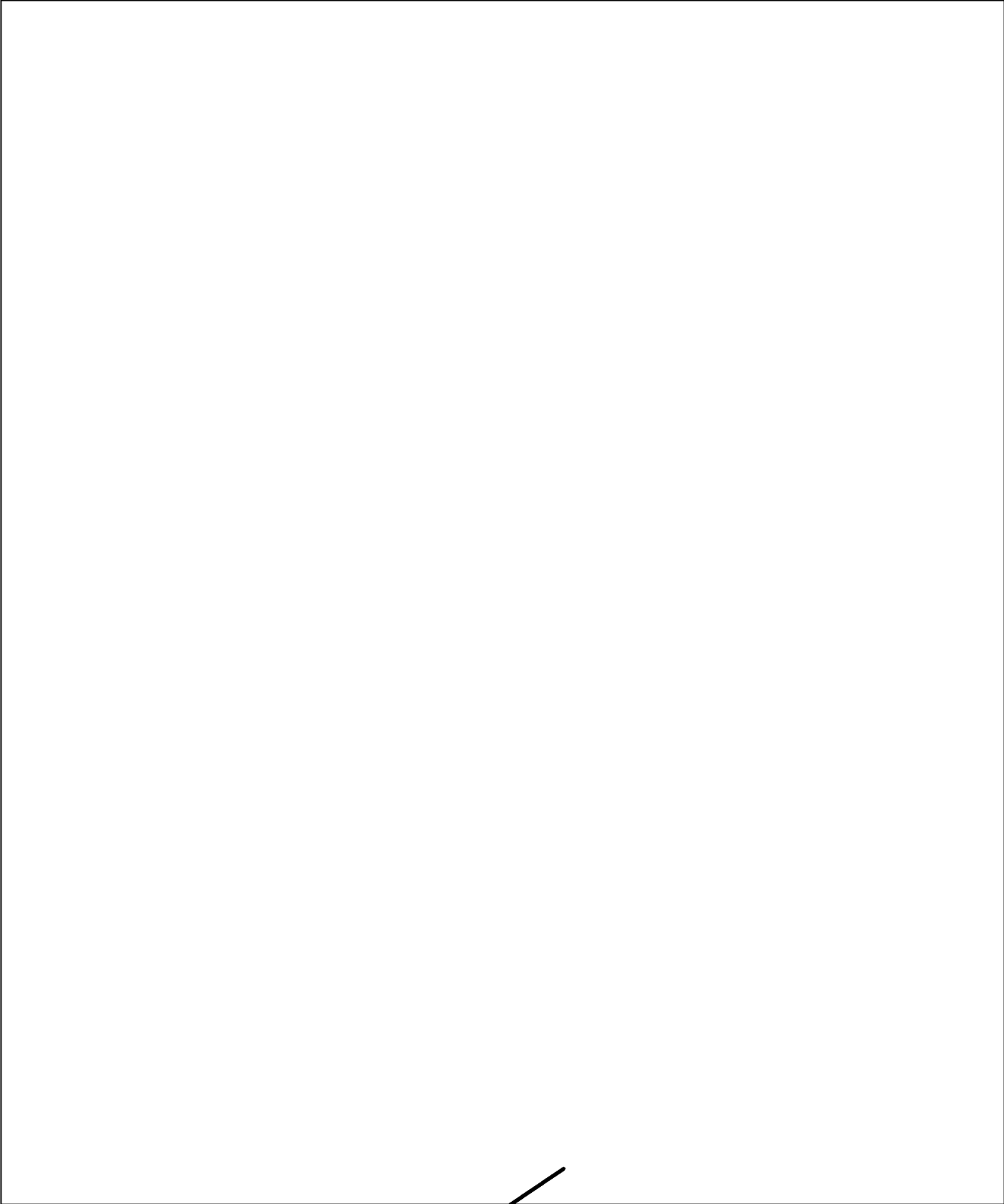
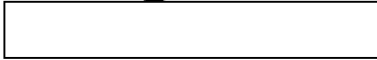
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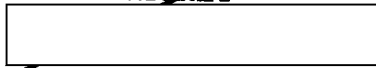


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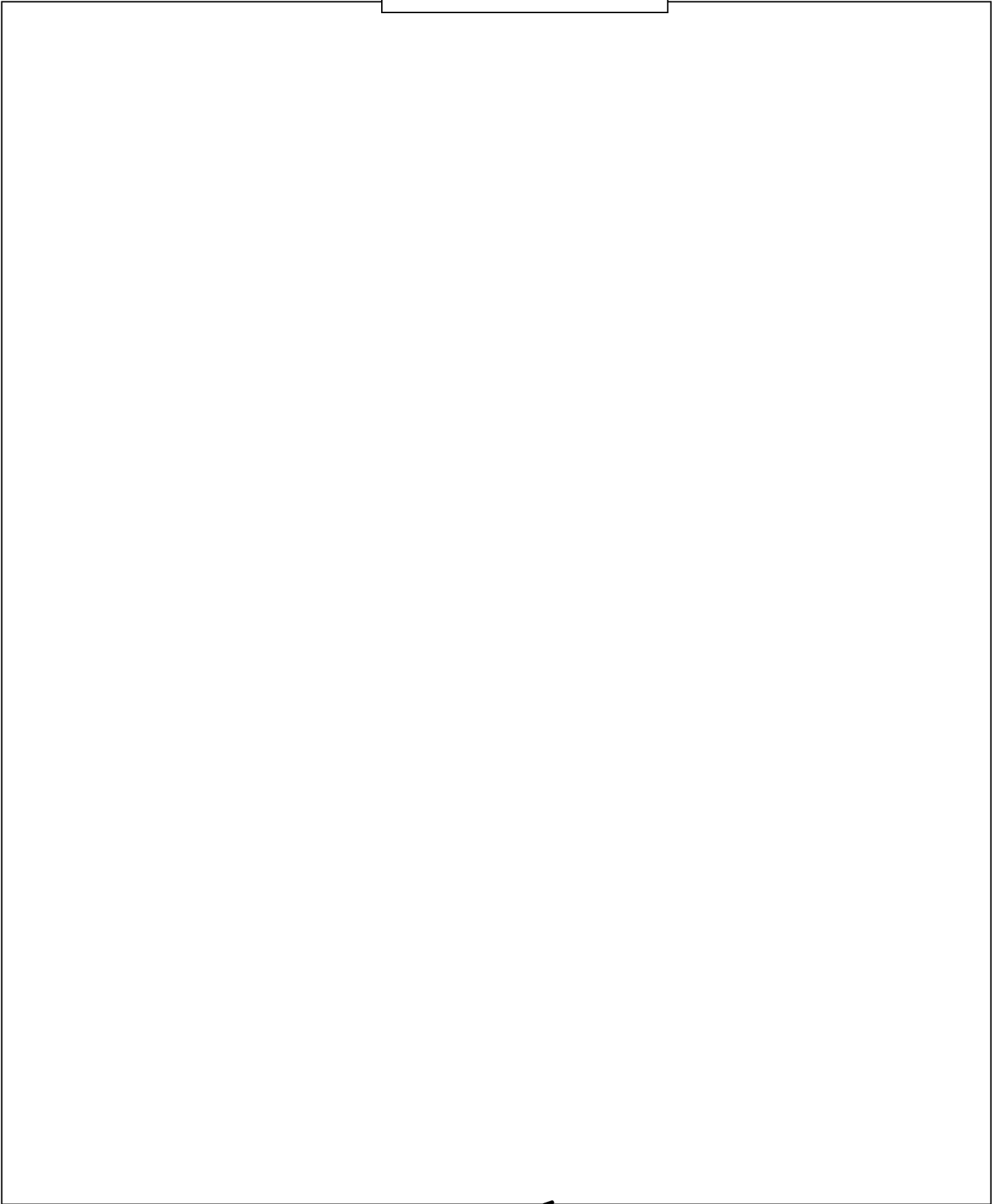
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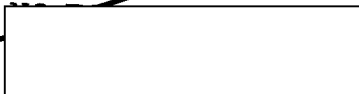
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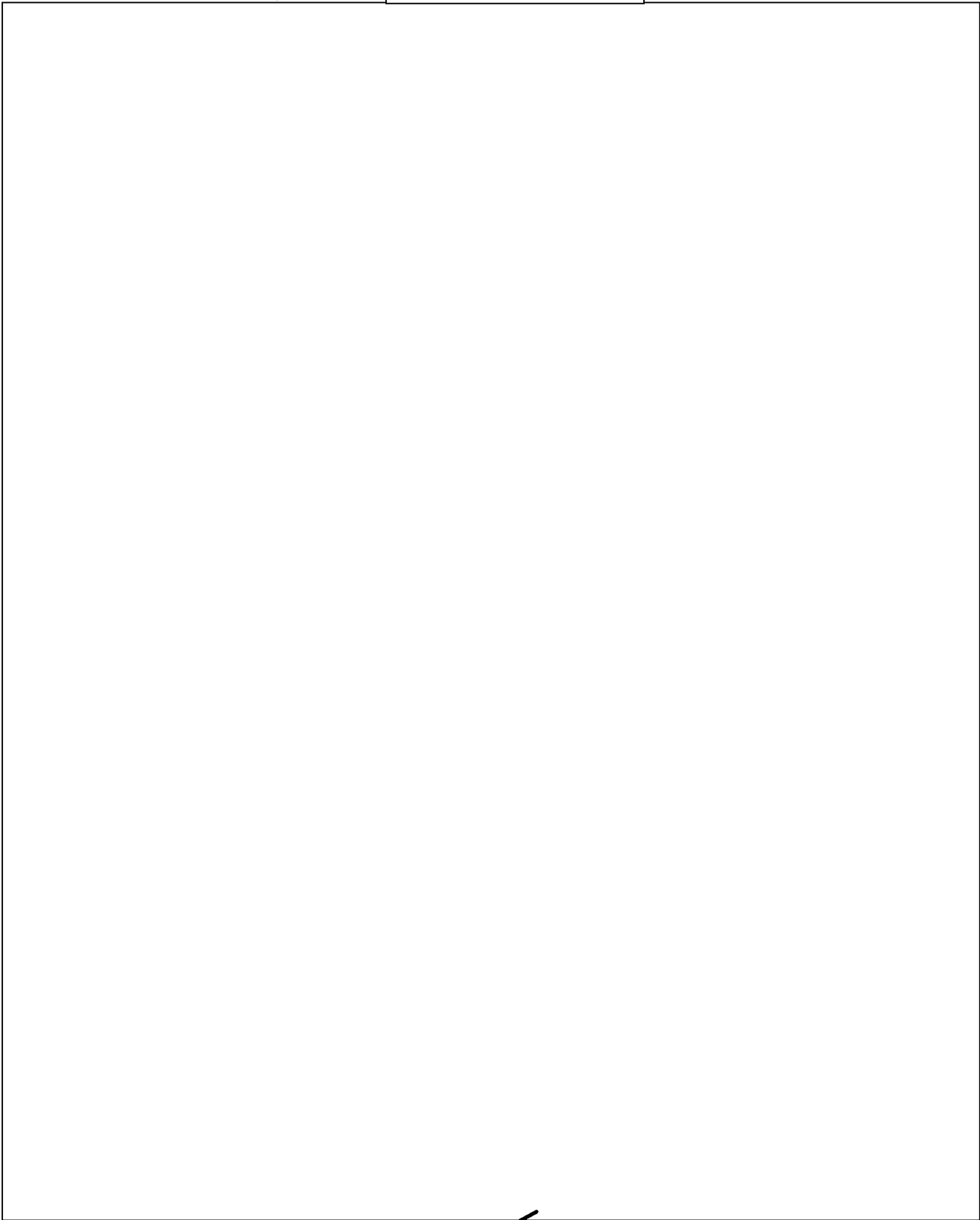
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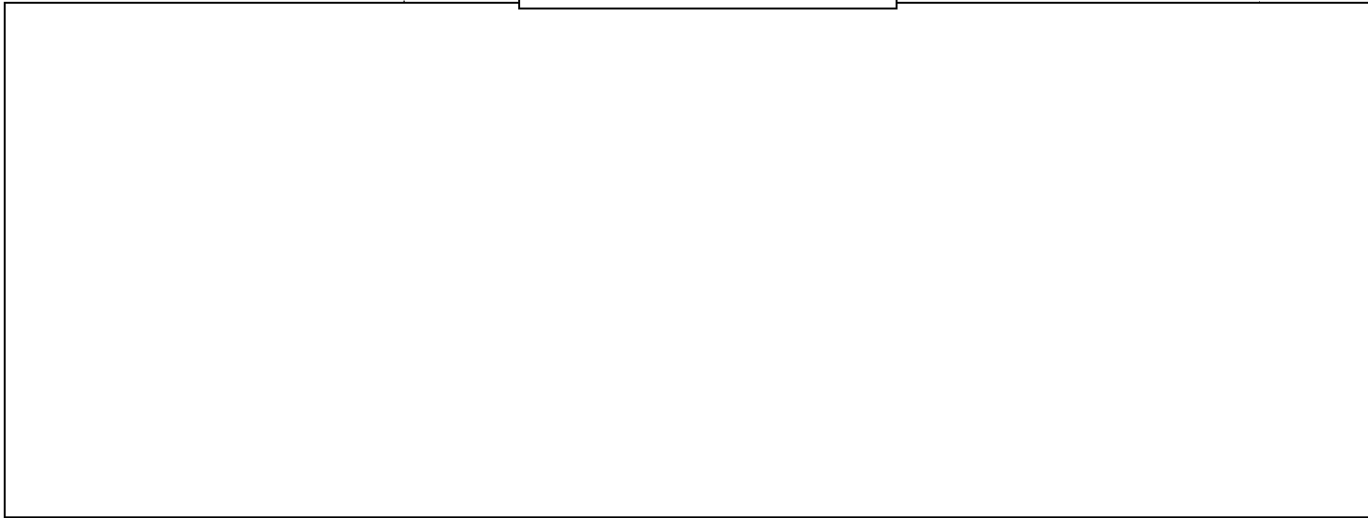
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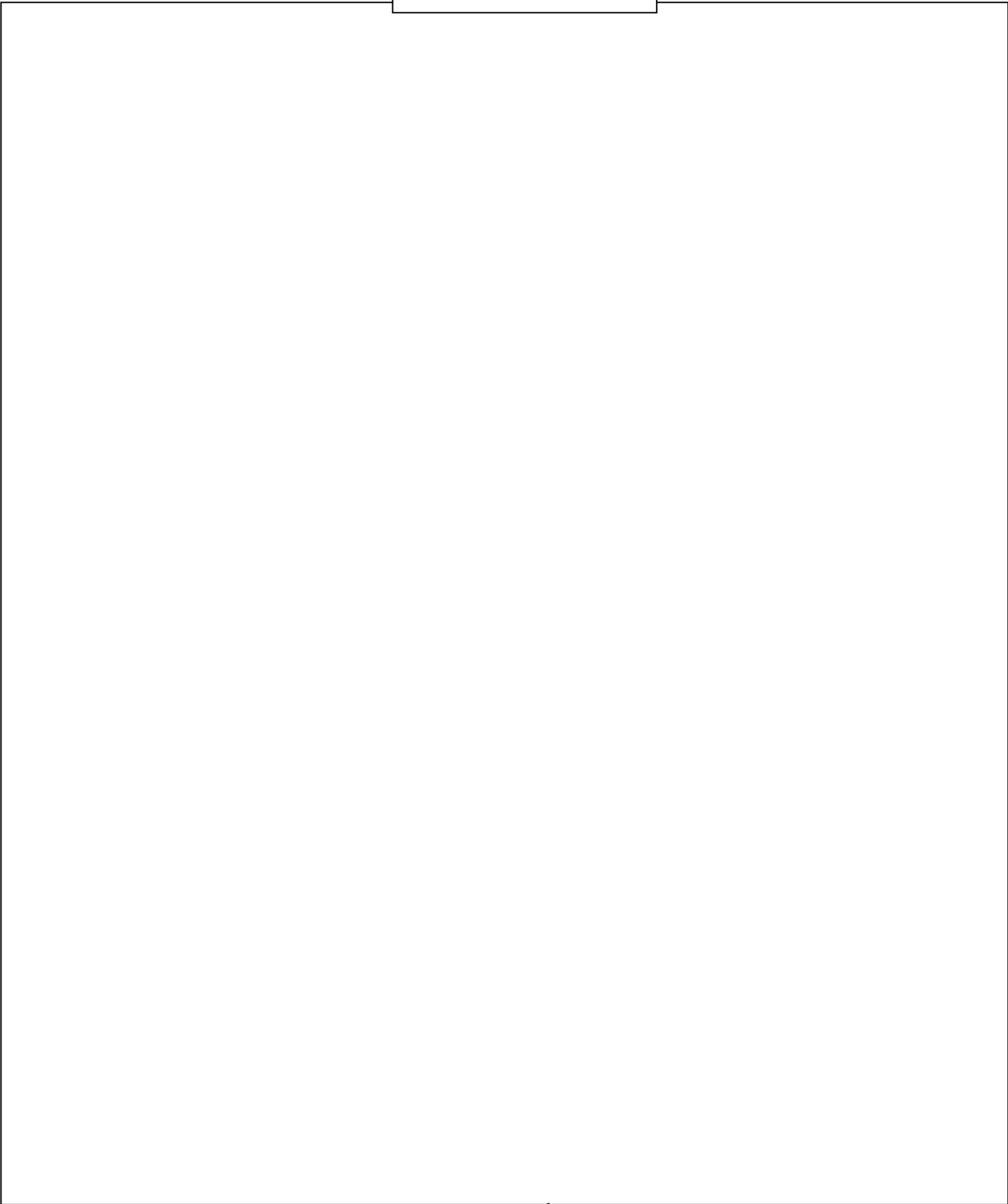
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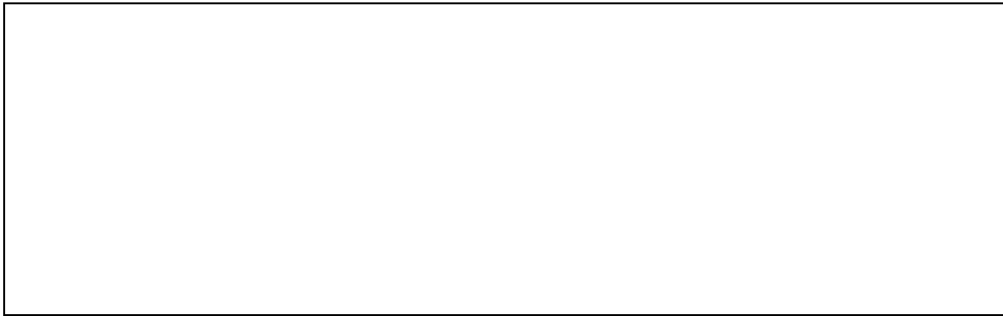
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REFERENCES



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